

What is claimed as invention is:

1. A process for synthesizing 4-amino 4H-1,2,4-triazole, comprising the steps:
 - a. reacting ethyl formate with a solution of hydrazine hydrate solution, ethanol, and sulfonated cross-linked polystyrene ion exchange resin in a condenser;
 - b. maintaining the mixture at a temperature of 75 degrees Celsius until no more liquid exits the condenser;
 - c. heating the solution to a temperature of approximately 130 to 133 degrees Celsius;
 - d. maintaining the solution at the temperature of step c for a sufficient time to remove ethanol and water and complete the synthesis of the 4-amino 4H-1,2,4-triazole;
 - e. cooling the solution to 60 degrees Celsius;
 - f. filtering the solution to remove the ion exchange resin; and
 - g. cooling the filtered liquid to ambient temperature.